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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/530,167	04/24/2000	CLAUS GODER	GK-GEY-1065	2203
26418	7590	08/24/2005	EXAMINER FARAH, AHMED M	
REED SMITH, LLP ATTN: PATENT RECORDS DEPARTMENT 599 LEXINGTON AVENUE, 29TH FLOOR NEW YORK, NY 10022-7650			ART UNIT 3739	PAPER NUMBER

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/530,167

Applicant(s)

GODER ET AL.

Examiner

Ahmed M Farah

Art Unit

3739

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 22-38 and 43-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 43-45 is/are allowed.
- 6) ☒ Claim(s) 22-30 and 35-38 is/are rejected.
- 7) ☒ Claim(s) 31-34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22-28, 30, 35 and 38 are again rejected under 35 U.S.C. 102(b) as being anticipated by James et al. U.S. Patent No. 5,463,200.

As to claims 22, 35, and 43, James et al (James, hereafter) disclose a system and methods of use for micro-machining a work piece by optical energy, the system comprising:

an Nd:YAG pulsed laser source **10** for providing pulsed laser beams **12**;
a deflecting device **26A** through which the laser beam is guided over the surface of the object (see Fig. 14 and column 7 line 1 to column 8, line 4); and
an optical device **14** provided for changing the distribution of the radiation intensity inside the laser beam cross-section (see Fig. 1), the optical device having at least one optical element with micro-optically active structure **16** (microlense), said micro-optically active structure having a diffractively active

element structured in the micrometer range whose dimensions approximately correspond to the wavelength of the pulsed laser beams as presently claimed (see column 4, lines 35-40; column 5, lines 42-62; and equations 1 and 2).

As to claims 23 and 28, James discloses the use of various microlenses (micro-optically active structures). Hence, the optical elements can be introduced into or removed from the laser beam path as presently claimed (see column 4, lines 50-55; and Figs. 2 and 18). James further discloses at least one optical element 22 with diffractive or refractive micro-optically active structure, which is suitable for influencing the intensity distribution in the laser radiation cross-section (see Figs. 1 and 11; and column 4, line 56 to column 5, line 7).

As to claims 24-27, 30, and 38, the micro-optical elements of James generate various beam intensity distributions, including Gaussian or bell-shaped intensity distributions (see column 5, lines 20-27; and column 8, lines 14--43). And, as to claim 44, he teaches that the material removal is carried out with micro-optically active structures having a vertical profile (see Fig. 18 column 5, lines 31-33).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29, 36, and 37 are again rejected under 35 U.S.C. 103(a) as being unpatentable over James in view of Telfair et al. U.S. Patent No. 4,911,711.

Although James, described above, teaches the use of computer controlled optical element **26A**, he fails to teach that said optical element is mounted on rotatable wheel as presently claimed. As to claims 36 and 37, he does not teach the method steps in which the surface is smoothed out.

However, Telfair et al. teach an alternative device for shaping objects by removing material from the surface of the object, the device comprising a laser source and an optical element mounted on a rotatable exchange wheel to scan the laser beams over the surface of the material being reshaped (see Fig. 2). Therefore, it would have been obvious to one skilled in the art at the time of the applicant's invention to modify James in view of Telfair et al. and use a rotatable wheel as an alternative scanning mechanism in order to scan the optical energy (laser beams) so as to remove material from the surface of the object being reshaped. It would have been further obvious to one skilled in the art to start the removal with a laser beam having small spot area so as to concentrate high energy/intensity onto the surface, and use larger beam with lesser intensity/energy to smooth out the reshaped surface.

Allowable Subject Matter

Claims 43-45 are allowed.

Claims 31-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed July 12, 2005, have been fully considered but they are not all persuasive.

With respect to the double patenting rejection of claims 22-25 in view of claim 1-4 of U.S. Patent No. 6,537,270, Examiner withdraws the rejection. With respect to claim 43, the examiner withdraws the rejection since the claim clearly recites that the microoptically active structure changes/shapes an intensity distribution of a laser beam to laser beam having a Gaussian energy distribution in at least one direction.

As to claims 22-38, Applicants' remarks are mainly directed to the argument that the James reference fails to produce a Gaussian intensity distribution. For instance, although the applicants recognize that the optical device 14 of James et al. is diffractive microoptic effective element, they nevertheless argue that this element does not help the device of James in producing a Gaussian intensity distribution of the laser beam.

It seems to the examiner the applicants are implying that the claimed microoptically active element of the instant claims changes the laser beam intensity distribution to a Gaussian energy distribution in at least one direction. This is contrary to

what is claimed. The instant claims recite 'an optical device provided for changing the distribution of radiation intensity.' The microoptically active structure is recited as a structure that influences the intensity distribution in the laser beam cross-section. The term 'influences the intensity distribution' is treated as being broader and/or different than 'changing the intensity distribution' as argued by the applicants.

Moreover, the reference of James et al. clearly teaches the use of an excimer laser (col. 1, line 48). It is also known in the optical art that in an excimer laser, generally, provides a Gaussian energy distribution in at least one cross-sectional direction (see Sumiya U.S. Patent No. 5,906,608, col. 3, lines 36-45). Clearly, the microoptically active structure of James et al. is adapted to transmit an excimer laser beam, which has Gaussian energy distribution in at least one direction. Therefore, the examiner's position is that since the microoptically active structure of James et al. is adapted to transmit an excimer laser beam, it inherently influences the energy density distribution of said laser. This does not mean that the microoptically active structure of James et al. changes a laser beam with different energy distribution to a laser beam with a Gaussian distribution in at least one direction.

If applicants desire to claim a microoptically active structure, which changes/alters intensity distribution of a laser beam in such a way that the output laser beam from said structure has a Gaussian intensity distribution in at least one direction, the claims must clearly recite this limitation.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ahmed M. Farah whose telephone number is (571) 272-4765. The examiner can normally be reached on Mon-Thur. 9:30 AM-7:30 PM, and 9:30 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eleni Mantis-Mercader can be reached on (571) 272-4740. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

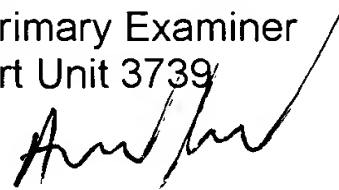
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ahmed M Farah
Primary Examiner
Art Unit 3739



August 17, 2005.